

Application No. 10/816,237

Remarks

The present response is accompanied by a request for Extension of Time with the appropriate fee.

The pending Office Action noted that the Examiner did not check the specification and drawings for all possible minor errors. The present application is a divisional application. Prior to filing the present divisional application, applicants incorporated into the text and drawings changes submitted in the parent application.

The pending Office Action rejected claims 1-6, 10-12, and 14-15 under 35 U.S.C. 102(b), citing U.S. Patent No. 6,053,608 to Ishii et al.

With respect to claim 1, the Office Action takes the position that in the Ishii et al. reference, element 20C corresponds to the "guide surface", and element 20D corresponds to a "side surface". The Office Action proceeds to take the position that there are two "shaped guide elements" that are positioned between the guide surface 20C and side surface 20D, and that one of the two guide surfaces would be construed as the guide element, and the other would be construed as a non-planar key shape belonging to at least one of the side surfaces. However, if one of the corners between the surface 20C and the surface 20D is considered a "non-planar key shape," that shape does not permit the ink stick to be inserted in an insertion direction into the solid ink feed system through an opening having a corresponding non-planar key shape. In accordance with the teaching of Ishii et al., a portion of the ink stick passes between the corners formed at the side walls 23B. However, the side wall shape between element 20C and 20D is designed to block passage of the ink stick into the channel between the side walls 23B, not to permit the ink stick to be inserted through an opening between the side walls 23B. Therefore, Ishii et al. do not teach Applicants' invention as defined in claim 1.

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The ink stick defined in independent claim 4 is also patentably distinct from the ink stick shown in the Ishii et al. reference. The ink stick of claim 4 includes a three-dimensional ink stick body having an insertion perimeter, and a shape guide element formed in the ink stick body. The insertion perimeter has a perimeter shape corresponding to the shape of an insertion opening through a key plate covering at least a portion of the elongate shaped guide rail. Ishii et al. does not show any correspondence between a perimeter shape of the ink pellet 20 and any opening through a key plate covering at least a portion of the element 23B.

Applicants' solid ink feed system defined in independent claim 10 includes a longitudinal feed channel, a first longitudinal guide rail, and a key plate having an insertion opening with an insertion opening shape through it to admit an ink stick in an insertion direction completely through the key plate into the longitudinal feed channel. The solid ink feed system additionally includes an ink stick having a longitudinal guide element and having an ink stick insertion perimeter shape that is substantially similar to the insertion opening shape. Ishii et al. do not suggest any relation between the shape of the opening through the element 23C and the shape of the ink pellet 20. In fact, the shape of the opening through the element 23C is limited by the need for the projections 23D to interact with the release mechanism of the ink pellet holder 25.

Applicants' claims 7-9 were rejected under 35 U.S.C. 103(a), citing U.S. Patent No. 6,053,608 to Ishii et al. in view of U.S. Patent No. 5,861,903 to Crawford et al. Applicants submit that a person of ordinary skill in the art at the time of the applicants' invention would not have thought to combine the teachings of the Ishii et al. reference and the teachings of the Crawford et al. reference as suggested in the Office Action. The Office Action suggests that the motivation for the skilled artisan to combine the teachings would be to gain

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the benefit of providing additional keying for the ink sticks as they are inserted into the feed system. However, the structure of the system described in the Ishii et al. reference substantially eliminates the ability to provide the keying function described in the Crawford et al. reference. The shape of the opening provided to receive ink sticks is limited by the need for the engagement releasing member 23D to interact with the claw member 27 of the ink holder 25. Thus, providing the various shapes shown by Crawford et al. to provide an opening that closely resembles the ink stick perimeter shape itself would not be seen as workable in the Ishii et al. system. Therefore, the person of ordinary skill in the art would not be led to combine the teaching of Ishii et al. with the teaching of Crawford et al.

The Office Action also rejected claim 13 under 35 U.S.C. §103(a), citing U.S. Patent No. 6,053,608 to Ishii et al. in view of U.S. Patent No. 5,223,860 to Loofbourow et al. The Office Action asserts that Loofbourow et al. disclose a guide rail that includes a recess and an ink stick guide element that is a protrusion on the guide surface of the ink stick, citing Figure 4 reference 39A and column 6, lines 39-68. The Office Action asserts that the skilled artisan would have been motivated to combine the teaching of the references to gain the benefit of providing different means of contact between the ink stick guide element and the guide rail. Applicants respectfully submit that the person of ordinary skill in the art would not have been motivated to combine the teachings of the Ishii et al. reference, which include an ink stick or ink pellet inserted from an ink holder 25 vertically into a horizontally oriented channel 23, with the system shown in the Loofbourow et al. reference, in which an ink stick is inserted directly through an aperture 39A of an aperture plate into an ink preload chamber 32A. Furthermore, Loofbourow et al. do not teach including any type of guide mechanism within the ink preload chamber. Thus, motivation to combine the teachings of Ishii et al.

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with the teachings of Loofbourow et al. is absent. Applicants have also added new dependent claims 16-20 to further specify aspects of their invention.

Applicants therefore respectfully submit that their invention is patentably distinct from the art of record, and respectfully request allowance of claims 1-20.

No additional fee is believed to be required for this amendment. However, the undersigned Xerox Corporation attorney (or agent) hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025. This also constitutes a request for any needed extension of time and authorization to charge all fees therefor to Xerox Corporation Deposit Account No. 24-0025.

If the Examiner considers personal contact helpful to dispose of this case, call David J. Arthur, at Telephone Number (585) 423-9215, Rochester, New York.

Respectfully submitted,



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